



## Feeding the rats

**This activity uses proportion to solve problems.**

The students will use the rat feeding chart provided to choose feeds for different days of the week.

1. Set the scene by introducing the domestic rat (*Rattus norvegicus*) and the need to provide them with a variety of foods in order to meet all their nutritional requirements.
2. Introduce the feeding chart as a means of doing this. Ensure students understand how the chart works and that this feed is for just one rat. Ask what we would do to feed 2 rats and so on.
3. Students can then work through the activity. It is worth stressing the need for clear presentation, particularly for the Star Challenge.



### **EXTENSION:**

If some students complete the Star Challenge quickly and are waiting for other students to catch up, you could ask them to work out how many of each fruit/vegetable they will need for their order.

For example, if an average carrot weighs 160g and they need 120g, they will have to order 1 whole carrot for the week. They may have to research the average weights of the relevant fruit and vegetables. Here are a few to get them started: orange 220g, tomato 90g, apple 180g, pepper 160g.

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## Curriculum Links

### **MATHS**

#### **Reason mathematically**

- interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning

## Feeding the rats

### Domestic rat

*Rattus norvegicus*

**Distribution:** Worldwide!

The brown rat, or Norway rat as it is also known, is one of the most widespread and successful mammals. Believed to originate from China, they are now found in almost every part of the world.



The Education department at Marwell keeps some pet rats to use for handling purposes during school workshops. They are very inquisitive and enjoy getting to meet all the children!

### Questions

- 1) Francesca uses the rat feeding chart to make up the feed for Monday evening.

For **each** rat she chooses:

<b>Tomato</b>	10g
<b>Potato</b>	7g
<b>Broccoli</b>	2g
<b>Mushroom</b>	3g

- a) How much of each ingredient will she need to feed 2 rats?
- b) How much of each ingredient would she need to feed 5 rats?
- 2) Use the feeding chart to choose an evening feed for Tuesday. Write down how much of each ingredient you would need for each rat and then how much you would need for 4 rats.



3) Use the feeding chart to choose an evening feed for Wednesday. Write down how much of each ingredient you would need for each rat and then how much you would need to feed 3 rats.



### **Star challenge!**

You need to order the rat food for the week.

Use the chart to decide on a feed for each night of the week.

You will need to get enough to feed 6 rats.

**How much of each ingredient will you need to buy?**

*Tip: Remember to lay your work out clearly!*

## Rat feeding chart

For **each** rat **each** day:

### Morning

Rat pellets	8
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### Evening

Fruit - choose 1 per day

<b>Mon</b>	Orange	18g	Tomato	10g
<b>Tues</b>	Banana	8g	Apple	4g
<b>Weds</b>	Cucumber	6g	Kiwi	4g
<b>Thurs</b>	Orange	18g	Banana	8g
<b>Fri</b>	Kiwi	4g	Apple	4g
<b>Sat</b>	Tomato	10g	Cucumber	6g
<b>Sun</b>	Apple	4g	Banana	8g

Vegetables - choose 3 per day

<b>Mon</b>	Potato	7g	Broccoli	2g	Carrot	5g	Mushroom	3g
<b>Tues</b>	Mushroom	3g	Cabbage	12g	Pepper	9g	Potato	7g
<b>Weds</b>	Broccoli	2g	Carrot	5g	Cabbage	12g	Pepper	9g
<b>Thurs</b>	Carrot	5g	Mushroom	3g	Potato	7g	Broccoli	2g
<b>Fri</b>	Cabbage	12g	Pepper	9g	Mushroom	3g	Potato	7g
<b>Sat</b>	Pepper	9g	Cabbage	12g	Broccoli	2g	Carrot	5g
<b>Sun</b>	Potato	7g	Pepper	9g	Cabbage	12g	Mushroom	3g